

Appln No. 10/020,506
Amdt date April 5, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-55. (Cancelled)

56. (Previously Presented) A printed wiring board comprising:
at least one carbon containing layer;
at least one electrically conductive layer that includes at least one circuit;
at least one dielectric layer located between the carbon containing layer and the electrically conductive layer; and

wherein at least one electrical connection exists between the carbon containing layer and the circuit on the electrically conductive layer.

57. (Previously Presented) The printed wiring board of claim 56, wherein the carbon containing layer comprises a substrate containing carbon impregnated with a resin.

58. (Previously Presented) The printed wiring board of claim 57, wherein the substrate comprises woven carbon fibers.

59. (Previously Presented) The printed wiring board of claim 57, wherein the substrate comprises unidirectional carbon fibers.

60. (Previously Presented) The printed wiring board of claim 57, wherein the resin is an electrically conductive resin.

61. (Previously Presented) The printed wiring board of claim 60, wherein the electrically conductive resin has a dielectric constant greater than 6.0 at 1 MHz.

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62. (Previously Presented) The printed wiring board of claim 60, wherein the electrically conductive resin contains a pyrolytic carbon additive.

63. (Previously Presented) The printed wiring board of claim 60, wherein the electrically conductive resin contains a silver oxide additive.

64. (Previously Presented) The printed wiring board of claim 60, wherein the electrically conductive resin contains carbon powder as an additive.

65. (Previously Presented) The printed wiring board of claim 60, wherein:
the carbon containing layer is clad on at least one side with second electrically conductive layer; and

an electrical connection between the carbon containing layer and the second electrically conductive layer is established by contact between the electrically conductive resin impregnated into the carbon substrate in the carbon containing layer and the second electrically conductive layer.

66. (Previously presented) The printed wiring board of claim 56, wherein the carbon containing layer comprises a carbon plate.

67.-70. (Cancelled)

71. (Previously Presented) The printed wiring board of claim 57, wherein:
the carbon containing layer is clad on at least one side with second electrically conductive layer; and

an electrical connection between the carbon containing layer and the second electrically conductive layer is established by contact between the carbon substrate in the carbon containing layer and the second electrically conductive layer.

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72. (Previously Presented) The printed wiring board of claim 56, wherein the electrical connection includes a lined through hole.

73. (Previously Presented) The printed wiring board of claim 72, wherein the lining of the lined through hole contacts the carbon containing layer.

74. (Previously Presented) The printed wiring board of claim 72, wherein the lining of the lined through hole contacts the circuit on the electrically conductive layer.

75.-84. (Cancelled)